WEST HARTFORD

Town of West Hartford – Office of the Town Manager
50 South Main Street, Room 310, West Hartford, CT 06107
P: (860) 561-7440  F: (860) 561-7438  www.westhartfordct.gov

Administration & Technology Committe
Town Hall, 50 South Main Street, Room 312
September 9, 2019
8:00 am

## MINUTES

1. Call to Order: 8:01 am

2. Present: L. Sweeney, S. Cantor, B. Kerrigan, C. Williams, B. Wenograd (via phone), M. Hart, P. Alair, G. Newsom; E. Labrot, J. Morin, R. Palmer, Jen Evans, Invited guests: J. Gilchrest, T. Exum, K. Hamilton

3. Business Items Discussed:
   a. FCC Third Report and Order Briefing: Jen Evans reported on State/Local Franchise authority in CT and concerns about the funding implications of the Order. She would like our State Legislators to speak with the Attorney General's Office, and she will keep everyone updated on developments within her association.
   b. An Ordinance for the Recodification of the Code of the Town of West Hartford: G. Newsom discussed the ordinance that involves a review of the Code to look for any errors/conflicting ordinances; the Town is required to complete this review every ten years.
   c. Cybersecurity update: J. Morin reported that training has been completed with Town staff.
   (See Attachments)

4. Staff Reports:
   a. Information Technology – J. Morin reported that the Town Website update is moving along.
   b. Plant & Facilities – R. Palmer submitted the attached update. No major issues at this time; the Town will transition from air conditioning to heat sometime in the middle of October.
   c. Town Clerk – E. Labrot reported that Absentee Ballots will be available starting October 4th and the Town Clerk's office will be open until 4:30 on Fridays for the month of October. The Registrars of Voters Office will also have extended office hours the month of October. There is a small committee meeting to develop a policy for displays and art on the walls of Town Hall. Report due by the end of the month to M. Hart.

5. Communications:
   a. July 1, 2019 Minutes

6. Adjourned: 9:10 AM

# Cybersecurity: Protecting yourself, your organization, and your client data

JARED MORIN, CGCIO, ED.M.
TOWN OF WEST HARTFORD, WHPS, WHPD, WHPL

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## agenda

Cybersecurity – Why It Matters

Types/Strategies of Attacks
- Social Engineering
- Phishing
- Email compromise
- Ransomware/Malware

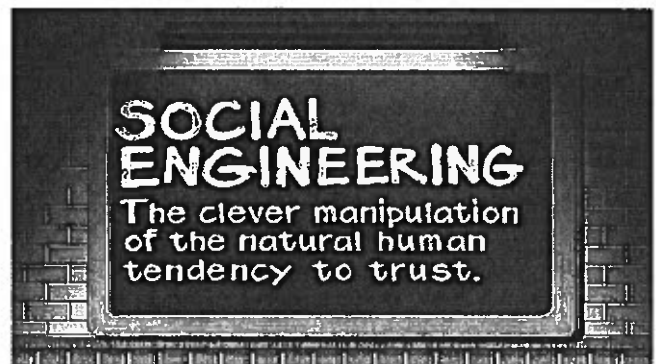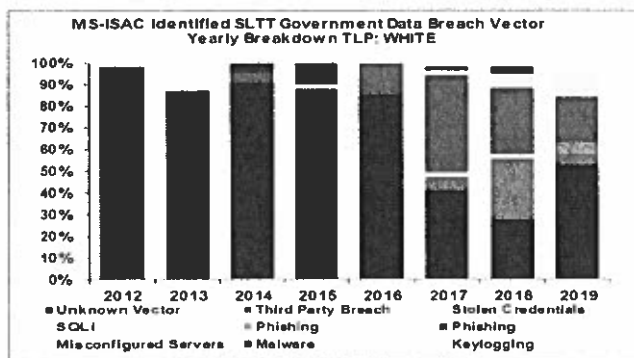What to Look For: Protect Yourself & Your Customers

Q&A

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## What is cybersecurity?

Cybersecurity is the practice of protecting systems, networks, and programs from digital attacks. These cyberattacks are usually aimed at accessing, changing, or destroying sensitive information, extorting money from users, or interrupting normal business processes.

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## Most common attacks:

DoS DDoS
MitM Man in the middle attack
**Phishing & spear phishing attack**
Drive-by attack
Password attack
SQL injection attack
Cross-site scripting (XSS) attack
Eavesdropping attack

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**MS-ISAC Identified SLTT Government Data Breach Vector Yearly Breakdown TLP: WHITE**

Bar chart showing yearly breakdown 2012–2019. Legend: Unknown Vector, SQLi, Misconfigured Servers, Third Party Breach, Phishing, Malware, Stolen Credentials, Phishing, Keylogging.

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## SOCIAL ENGINEERING

The clever manipulation of the natural human tendency to trust.

## Phishing & spear phishing/whaling attacks

A phishing attack is the practice of sending an Email that appears to be from trusted sources with the goal of gaining personal/confidential/sensitive information or influencing the user to do something.

Combines social engineering with technical trickery.

Spear Phishing is a very targeted type of phishing activity; attackers take the time to learn about an organization and the people they are targeting to appear more authentic.

Phishing can come from a spoofed Email address or from a compromised legitimate email account.

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## 93% of all breaches or incidents are caused by people falling for phishing scams



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**PayPal**

Your Transaction Has Been Declined

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## Hacker 101: Build Trust

Spear phishers personalize emails to try to gain your trust
- Full name
- Mailing address
- Name of your employer
- Personal Data (SSN, Banking Account Number, etc.)

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## Approach

The Double Barrel attack uses multiple emails to create a believable narrative.

**STAGE ONE: THE LURE**

**1ST EMAIL BUILDS TRUST**

From: Lena Dobbs@example.com
To: jack.doe@example.com
Subject: Re: Request

Hey Jack,
I'm about to jump on a flight. Just to let you know I'll be sending you a file when I land or get wifi.

-Lena

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**Stage Two: The Phish**

The second email contains malicious attachments or links

From: Lena Dobbs@example.com
To: jack.doe@example.com
Subject: Re: Request

Jack,

Thank you for your patience.
Attached is the file I need you to review.

Thanks for your help.
-Lena

# How to Spot a Phish

## Type #1: CEO Fraud

Impersonates an executive

Hacked or spoofed email address

Exploits authority

## Sample CEO Fraud

Date: Mon, 4 Feb 2019 22:18:08 GMT
From: Michael Smith [msmith1@gmail.com]
To: lport-o@sog.unc.edu
Subject: Please get back to me on this

Do you have a moment? I am tied up in a meeting and there is something I need you to take care of.

We have a pending invoice from our Vendor. I have asked them to email me a copy of the invoice and I will appreciate it if you can handle it before the close of banking transactions for today.

I cant take calls now so an email will be fine.

Sent from my iPhone

## Type #2: Bogus Invoice Schemes

* Impersonate trusted vendor or supplier
* Use fake invoices
* Point you to new location for wire transfer
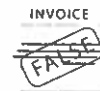
INVOICE

## Town in New Jersey

- Opened email attachment titled "Invoice.doc"
- Document is blank, Emotet malware downloads through macros
- Antivirus doesn't detect it, no known way to clean
- Propagates through network, steals passwords, contacts
- Next day employees report personal Amazon accounts hacked
- Business accounts hacked, Staples, Amazon
- Had to shut entire network down, wipe all computers manually

## Avoiding BEC Scams

Always check the sender and verify it is legitimate

Check reply-to addresses as well

Check links before clicking

## A Real Threat...

- 68% of businesses sustained a reportable/sizable cyberattack in 2018 and 20% were unaware it happened or for how long
- 41% experienced a data breach, which is the new "gold" (data=money)
- Most common attack vector is the end user falling for a phishing scam (weakest link)
- 200 reported public sector ransomware attacks in 2019 to date...
- Ongoing end user training is needed; dedicated Cybersecurity IT Specialists

## Real Examples

City of Valdez, AK

22 cities and counties in Texas

City of Atlanta, GA

San Francisco, CA

## MS-ISAC Advisory

## More Examples...

Jackson County, GA

Town of Farmington, CT

Baltimore, MD

Town of Glastonbury, CT

## Random Bait to Chew On

**Top phishing disguises:**

- Bills / Invoices (15.9%)
- Email delivery failures (15.3%)
- Legal / Law enforcement (13.2%)
- Scanned documents (11.5%)
- Package delivery (3.9%)

**Top Phishing Lures:**
- Dropbox Accounts
- Financial Institutions
- Generic Email Credential Harvesting

**Top malicious attachments:**

- Office files (38%)
- Archive files ( zip/etc ) (37%)
- PDF files (14%)

**Highest Click Rates:**
- Docusign (7%)
- Dropbox (2%)
- IRS (1%)

## PREVENTION COSTS 10%-20% THE COST OF REMEDIATION...

## Proactive measures from West Hartford IT

**Part of our ongoing Cyber Defense Strategy includes:**

Hiring IT security firms to attempt to gain access to our systems via
- Brute Force Attack (attempts to gain access through random password generation)
- Vulnerability scanning (looks for unpatched sites/services/open ports/etc
- Phishing & Spear Phishing attacks on employees

DarkTrace (looks for the anomalous not the bad or good)

Bandura Threat Intelligence Gateway (blocks entire regions of the world and other known bad actors)

MS-ISAC (intrusion detection on every state network, computer and network forensics, log analysis, they monitor all our public facing IPs and domains), they handle 40-50 cases per month of government attacks

## More is needed...

Dedicated Cybersecurity IT Specialists for managing all these new systems, staying ahead of the latest zero-day threats, training end-users, and for disaster recovery planning & execution,

Currently 1 million Cybersecurity jobs open globally;

**Participating in Nationwide Nationwide Cybersecurity Review (NCSR)**

The Nationwide Cybersecurity Review is a no-cost, anonymous, annual self-assessment designed to measure gaps and capabilities of state, local, tribal and territorial governments' cybersecurity programs. It is based on the National Institute of Standards and Technology Cybersecurity Framework (NIST CSF), is sponsored by the Department of Homeland Security (DHS) & the Multi-State Information Sharing and Analysis Center® (MS-ISAC®).

The NCSR evaluates cybersecurity maturity across the nation while providing actionable feedback and metrics directly to individual respondents in State, Local, Tribal & Territorial (SLTT) governments.

Using the results of the NCSR, DHS delivers a bi-yearly anonymous summary report to Congress providing a broad picture of the cybersecurity maturity across the SLTT communities.
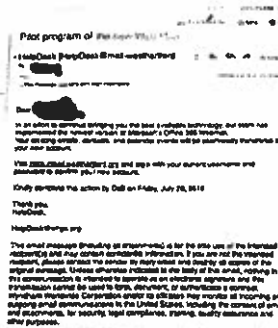
## THE RESULTS:

19% of the targeted 40 Town of West Hartford employees fell for the attack

From 8 different departments

Provided their real username and passwords

The simulated attackers then used those credentials to access the employee Email accounts and VPN, now they are INSIDE the network.

Used keyword searches in Email to find passwords to other systems (NEVER EMAIL PASSWORDS).

Took 5 minutes.

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you have verified the sender and know the content is safe.

**(EXTERNAL SENDER) Change DD**

I need to fill out a direct deposit account change form. Kindly send me one or I email the details to you directly?

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you have verified the sender and know the content is safe.

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From: Rick Ledwith <ceo@cutco.com>
Sent: Friday, November 30, 2018 10.29 AM
To:
Subject: [EXTERNAL SENDER] Urgent

Hi [REDACTED]

I changed my bank and I'd like to change my paycheck dd details, can the change be effective for the current or next pay date?

Thanks

Rick Ledwith

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## NEW! Techguard

Online employee training to help staff better detect scams and attacks;

Ability to simulate attacks;

Courses can be assigned upon request or area of need;

Contact Helpdesk to participate. x9636

**TECHGUARD SHIELD**

**Phishing**
PROTECTION FROM THE BUSINESS EMAIL ATTACK

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## How to combat phishing:

**Critical thinking** — Do not accept that an email is the real deal just because you're busy or stressed or you have 150 other unread messages in your inbox. Stop for a minute and analyze the email. Check headers. If you see EXTERNAL SENDER from someone that works here, it is PHISHING.

**Hovering over the links** — Move your mouse over the link, but do not click it! Just let your mouse cursor over the link and see where would actually take you. Apply critical thinking to decipher the URL.

**Analyzing email headers** — Email headers define how an email got to your address. The "Reply-to" and "Return-Path" parameters should lead to the same domain as is stated in the email.

**Call the Sender** at a known number, not any number provided in Email to verify authenticity of request.

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## https://haveibeenpwned.com/

**';--have i been pwned?**

Check if you have an account that has been compromised in a data breach

## Other Strategies

- Place a freeze on all 3 of the major credit bureaus (Equifax, Experian and TransUnion)
- Sign up for credit monitoring
- Don't use the same Password for multiple accounts
- Keep Passwords secure, never share them with anyone, avoid the obvious (names, dates)
- Make your Passwords a Passphrase, use non-English words
- Scrutinize all Emails and phone calls (easy to spoof phone numbers)
- Use 2-factor authentication
- Use biometrics (fingerprint or eye) on supported devices
- Clear your social media presence, keep your social media presence clean
- Close old shopping and rewards accounts
- Follow US-CERT guidance for properly destroying data /disposal of old devices
- Perform a factory reset (hard reset) on smartphones before disposal
- Put a PIN on your IRS tax returns

## Any Questions

# WEST HARTFORD

Town of West Hartford – Department of Information Technology
50 South Main Street, Room 409, West Hartford, CT 06107
P: (860) 561-6636   F: (860) 561-6626   www.westhartfordct.gov

## MEMO

To:  Tom Moore, Superintendent of Schools

From:  Jared W. Morin, Chief Information Officer

CC:   Andrew Morrow, Assistant Superintendent

Date:  August 22, 2019

Re:  Opening of Schools update 2019

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Below are the school district accomplishments for my department from the past school year, please contact me with any questions.

1. Implemented a new data validation system for PowerSchool to ensure data entered meets field requirements.

2. Built networks and programmed security cameras for the new Hall science wing, various school construction projects and other office moves at Town Hall.

3. Digitized many paper forms leveraging Ecollect, a new online form system for PowerSchool, inclusive of online registration for new students.

4. Implemented LevelData, a new system designed to improve automation and synchronization across disparate systems.

5. Deployed over 1,139 new devices as part of the ongoing strategic technology refresh cycle; 141 new iPads, 802 Chromebooks and 196 Windows devices for instruction.

6. Installed new municipal fiber to the Beachland Park facility for Pupil Service programs.

7. Launched our new website, which is more mobile friendly and of higher quality; all school sites are customized for their own logo and school colors.

8. Maintained 99.99% uptime availability of the entire communications infrastructure for the past 12 months.

9. Doubled the internet speed for the district, going from one gigabit to two gigs.

10. Implemented a new notification system for Town Hall to help keep staff and visitors informed.

11. Closed over 12,959 work orders, an increase of 10.6% over the prior year; average time to completion was 5 days, with 61% of work orders completed in 1 day or less.

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MEMO

To:  Matthew W. Hart, Town Manager

From:  Jared W. Morin, Chief Information Officer

Date:  September 6, 2019

Re:  Administration and Technology Committee Update

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Below are the Town IT accomplishments for my department from the past fiscal year, please contact me with any questions.

1. Implemented new managed guest wireless (Wi-Fi) for Bishops Senior Center, Veterans Memorial Skating Rink, Westmoor Park, Rockledge Country Club, Elmwood Community Center and Cornerstone Aquatics Center.

2. Providing ongoing Cybersecurity awareness training to all departments and divisions upon request.

3. Implemented Telestaff online for Police and Fire time and attendance, with integration to payroll.

4. Implemented ESO for the Fire Department to improve efficiencies and reduce duplication between EMS and Fire systems.

5. Working with Everbridge to implement Conference Bridge to improve crisis communications in urgent situations.

6. Implemented new address tools and grouped map themes by category in GIS system to improve ease of use for residents.

7. Procured FAROs for the Police Department, a new technology that digitally captures an accident or crime scene, analyses the data in 3D and delivers impactful courtroom materials, thus saving a lot of manual reconstruction effort.

8. Served as co-chair for the Permitting Task Force to take a more holistic look at the current permitting processes and develop a roadmap for improving the customer experience.

9. Maintained 99.99% uptime availability of the entire communications infrastructure for the past 12 months.

10. Implemented a new notification system for Town Hall to help keep staff and visitors informed.

11. Closed over 12,959 work orders, an increase of 10.6% over the prior year; average time to completion was 5 days, with 61% of work orders completed in 1 day or less.

# Town of West Hartford – West Hartford Public Schools

**WEST HARTFORD**

Plant and Facilities Services Department
17 Brixton Street, West Hartford, CT 06110
Phone: 860 561-7920
Fax: 860 561-8141

West
Hartford
Public
Schools

| | |
|---|---|
| TO: | Administration and Technology Committee |
| FROM | Robert Palmer, Director of Plant and Facilities Services |
| DATE: | September 9, 2019 |
| SUBJECT: | Plant and Facilities Services Update |
| CC: | Matthew Hart, Town Manager |

## Daily Operations

Town and school buildings continue to perform well with no major issues being encountered. We are beginning to prepare for the transition from air conditioning to heating which typically occurs in the middle of October.

## Capital Projects

### Recently Completed and Current Projects - Town
- DPW Incinerator Building Demolition – Completed
- Cornerstone Roof Replacement & Structural Repairs – Completed
- Cornerstone Sanitary Drain Pipe Replacement – Completed
- Cornerstone HVAC Replacements – In process
- Faxon Library Drainage Issues - Completed
- Town Hall Front Door/Window Wall Replacement – Awarded, about to start
- Brixton Street Facility Site Assessment and Master Plan – In process
- Town Hall Solar Installation – In process

### Recently Completed and Current Projects - BOE
- Hall Science Labs – Completed
- Sedgwick (phase 1 of 2) and Morley Roof Replacements - Completed
- Duffy and King Philip Flooring Replacements and Painting - Completed
- King Philip Electrical Switchgear Replacement at - Completed
- Sedgwick Auditorium Seating Replacement at - Completed
- Bugbee Main Office Reconfiguration and Security Improvements – Phase 1 of 2 Completed
- Hall Synthetic Turf Replacement – Completed
- Hall Auditorium Sound Replacement – In process
- Aiken, Conard, Webster Hill Security Improvements - Completed
- Hall and Sedgwick Masonry Repairs - Completed
- Morley Masonry Repairs – In process, to be completed in October
- Smith Chiller Replacement – Fall 2019/Winter 2020
- Hall Cooling Tower Replacement - Fall 2019/Winter 2020

### Planned Summer2020 Projects – Town and BOE
- Cornerstone locker room flooring replacements
- King Philip boiler replacement
- Norfeldt parking lot resurfacing
- Wolcott playground replacement
- Hall Auditorium seating replacement

- Hall Roof replacement over Guidance area
- Sedgwick (phase 2 of 2) and Braeburn roof replacements
- Smith and Norfeldt flooring replacement and painting
- King Philip, Norfeldt, Smith, Webster Hill and Wolcott security improvements
- Conard visitor bleacher replacement

## Energy Conservation and Sustainability

- Utility Budget
  - FY19 is still being reconciled, but the Utility Services Fund ended about **$400,000 under budget** for Town and Board of Education combined. Expenditures were only slightly above FY18 despite utilty rate increases across the board.
  - The savings are largely due to reductions in use (kWh) from the implementation of additional energy conservation projects with reappropriated utilty incentive funds. **FY19 electrcity use was 17.6 million kWh, down over 18% from 6 years ago**.
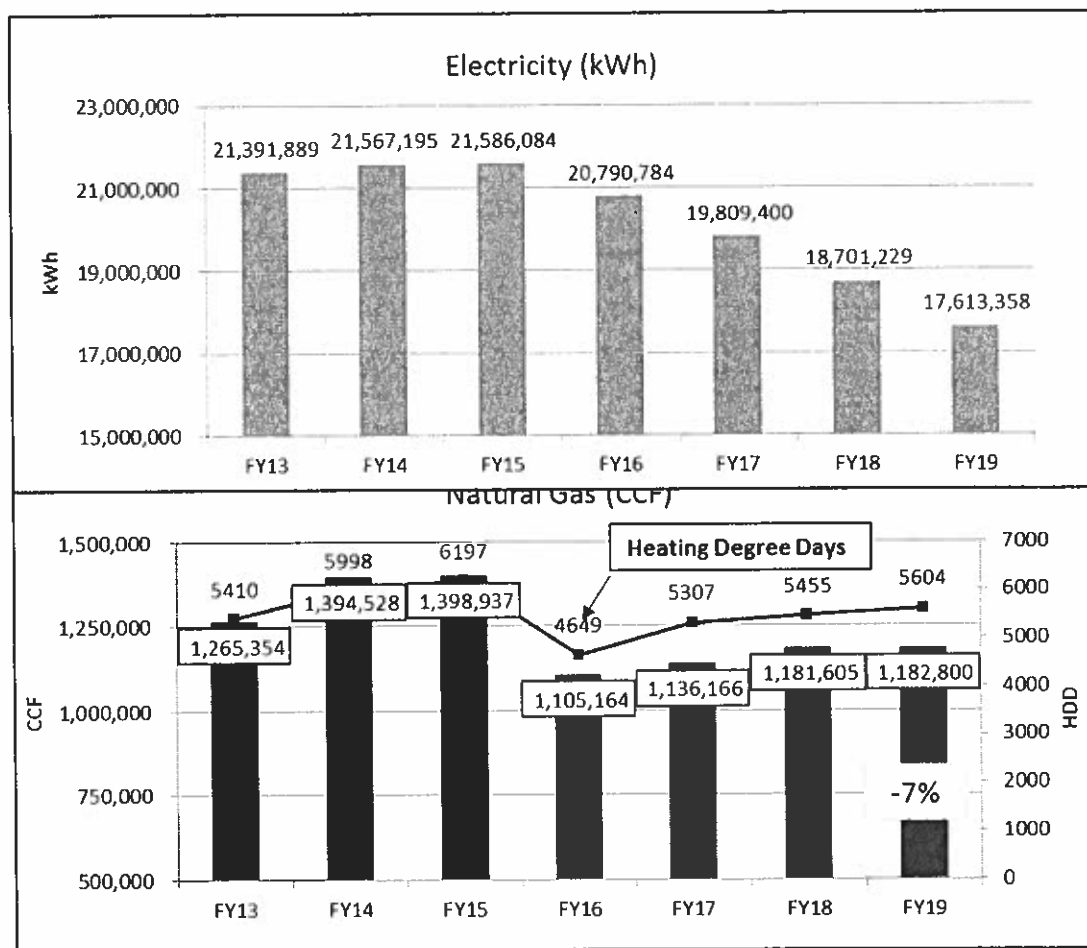


  - As MDC rates rise at astounding rates (50%+) and new fees are added, this is an area that should be investigated more closely. The Town (separate from BOE) now spends more annually on water than natural gas.

- Energy Supply Procurement
  - We have generation/supplier contracts for electricity locked in through Dec 2023.
    - The current June-December 2019 Eversource rate is 8.796 cents/kWh.
    - Constellation contract on 10 large accounts is at a fixed rate of 8.27 cents/kWh for April 2019-December 2020.

- Small accounts remain with Engie at 7.649 cents/kWh fixed for December 2018-December 2020
- All acounts will go to 7.57 cents/kWh fixed for December 2020 - December 2023.
  - Gas still floating on CNG – annual average around $0.85/ccf, up 8.5% over last year. We continue to monitor gas contract prices, but suppliers cannot beat CNG.

- Renewable Energy Projects
  - A 600 KW solar project on King Philip MS at 5.3 cents/kWh and 100 KW on Town Hall at 6.5 cents/kWh are proceeding with Verogy. Town Hall construction starts this week.
  - Virtual Net Metering credits from a 2.4 MW (approx 3 Million kWh per year) solar farm in Thompson, CT, started in Feb 2018. This 20-yr contract has resulted in financial savings of $30,000 in FY18 and $78,000 in FY19.
  - For FY19, we will increase our annual REC (renewable energy credit) purchase from our usual 20% to 100% green power.
    - This will cost an additional $12-13,000 (<0.5% of our annual electricity budget).
    - It will allow the Town of West Hartford to make the claim of "100% Renewable Energy" with respect to municipal electricity.
    - It will also enhance our participation in programs like the EPA's Green Power Partnership and Sustainable CT, as well as supporting the long-term goals of our town Comprehesive Energy Plan.

- Energy Conservation Projects
  - Most of the energy projects that were identified in FY16 have been completed.
  - Eversource has asked the Town to partner on a PR initiative highlighting this project.
  - LED T8/T5 tube replacements in Town and BOE buildings are ongoing, funded by higher-than-anticipated utilty incentives from the original FY16 projects. LED lamps are in high demand, and we face delays in receiving material. Over half the larger Town/BOE buildings are complete. This summer, all of the school gyms were converted to LED, as well as Sedgwick MS.

- Sustainable CT
  - After achieving Bronze certification in 2018 (good for 3 years) and sitting out 2019, our plan is to pursue Silver certification in 2020.
  - Sustainable CT has just rolled out a Community Match Fund in partnership with on-line crowdfunding platform ioby. The prgram will match community/town fundraising efforts for eligible projects 1:1.